

claim 10

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TITLE: SEQUENTIAL DECODER
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ABSTRACT:

PURPOSE: To reduce the number of processing steps, and to improve the processing speed by constituting the titled decoder of a syndrome forming device, a buffer memory inputting and preserving a syndrome series and preserving and outputting an error series, a sequential decoding arithmetic circuit, and a correcting circuit correcting a data corresponding to an information symbol in a received data.

CONSTITUTION: The syndrome forming device 101 generates a corresponding syndrome series $S<SB>k</SB>$ based on a received series and

stores it in a buffer memory 102. Moreover, a sequential decoding arithmetic circuit 103 has a state trellis corresponding to the syndrome forming device in its inside to transit the state of trellis based on the syndrome series S_{k-1} fetched from a buffer memory 102. Then the decoding arithmetic operation is executed and the error series obtained is written in the buffer memory 102. An error series corresponding to the information symbol in the decoded series written in the buffer memory 102 is used to allow a correction circuit 104 to correct a data corresponding to an information symbol among the received data, thereby generating a final decoded data.

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